

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1-12. (Canceled)

13. (New) A motor vehicle identity anti-fake apparatus, characterized in that the apparatus comprises member anti-fake means (3), a microcomputer (1), information displays (4) and communicators (2);

the microcomputer (1) comprising a microprocessor (11), a memory (12) and a group of communication interfaces (13), which microcomputer is mounted on the vehicle or license plate thereof;

each of the member anti-fake means (3) being a means containing identify identification information, the license plate and respective members of the vehicle legally enrolled and registered according to stipulations of the administrative institution being respectively provided with at least a member anti-fake means (3); respective member anti-fake means being in signal connection with respective communication interface (13) of the microcomputer (1), respectively; there being two types of member anti-fake means, wherein one type is the member anti-fake means (3-1) that is in wired signal connection with the microcomputer, and the other type is the member anti-fake means (3-3) that is in wireless signal connection with the microcomputer; the microcomputer monitoring status of the identify information of respective member anti-fake means, so as to make judgment on the status of the identity of the license plate or members of the vehicle on which the respective member anti-fake means mounted;

the informal displays (4) being mounted on the license plate or members of the vehicle, and being connected to the communication interfaces (13) of the microcomputer (1) by wires; the information displays employing colorful light information display (41), acoustic information display (42) or screen display (43), and the function of these information displays being to convert the signal transmitted from the microcomputer (1) and reflecting the legality of the status of the vehicle identity to information expressing modes, for example colorful light, acoustic information or graphics and text, that can be identified directly by sense of human being;

the communicators (2) being wireless bidirectional communication apparatus and mounted on the vehicle or the license plate, and the number of the communicators being at least one; the communication interfaces of the communicators being connected to the communication interfaces (13) of the microcomputer (1) by wires; and the communicators being used for intercommunication between the motor vehicle identity anti-fake apparatus and the outside administrative institution;

whereby a vehicle-mount information system for monitoring and reflecting the legality of the status of the vehicle identity is formed by means of the signal connections among the microcomputer (1), the respective member anti-fake means (3), the information displays (4) and the communicators (2).

14. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that each of the member anti-fake means (3-1) being in wired signal connection with the microcomputer is a IC chip means, comprising a data input/output interface (302), a memory (301) for storing identity identification information, wherein the data input/output interface (302) is connected to the communication interfaces (13) of the microcomputer (1) by wires.

15. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that each of the member anti-fake means (3-3) being in wireless signal connection with the microcomputer is a noncontact IC card chip, and is in signal connection with said microcomputer through a noncontact IC card read/write unit, wherein said noncontact IC card read/write unit is mounted on the vehicle or the license plate and is in signal connection with said concontact IC card chip in a radio frequency communication manner; and wherein, the communication interface of said noncontact IC card read/write unit is connected to said communication interface (13) of said microcomputer (1) by wires.

16. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that each of the member anti-fake means (3) are fixed on the license plate or respective members of the vehicle in a sticking or covering seal manner.

17. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that each of said colorful light information displays (41) is an electrical light-emitting means, and there are at least three colorful light information displays (41) with at least two different colors, wherein the input ports of respective colorful light displays (41) are connected to the communication interfaces (13) of the microcomputer (1) by wires, respectively.

18. (New) The motor vehicle identity anti-fake apparatus according to claim 17, characterized in that the electrical light-emitting means is a light-emitting diode.

19. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that said acoustic information display (42) is a electrical sounding means, and there is at least

one acoustic information display, wherein the input port of the acoustic information display (42) is connected to the communication interface (13-8) of the microcomputer by wires.

20. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that said screen information display (43) is an electronic screen information display means having a communication interface, and there is at least one screen information display, wherein the screen information display is mounted in the cab of the vehicle and the communication interface of the screen display is connected to the communication interface (13-7) of the microcomputer via wires.

21. (New) The motor vehicle identity anti-fake apparatus according to claim 17 or 19, characterized in that said colorful light information displays (41) and acoustic information display (42) are connected to the microcomputers, respectively, via an acoustooptic controller (5), wherein each of the acoustooptic controller (5) is a microcomputer system having an acoustooptic drive module (502), comprising CPU, ROM, RAM, I/O, a communication interface (501), an acoustooptic drive module (502) and an output port (503); and the communication interface of each of the acoustooptic controller (5) being connected to the communication interface (13) of the microcomputer via wires, respectively; the output port (503) of respective acoustooptic controller being directly connected to the input port of respective colorful light information displays (41) or the acoustic information display (42), wherein the connection ports and the respective acoustooptic controller are packaged into an integral closed body by insulating material.

22. (New) The motor vehicle identity anti-fake apparatus according to claims 13, 17, or 19, characterized in that said member anti-fake means (3), colorful information displays (41), acoustic information display (42), microcomputer (1) and communicators (2) are mounted and packaged into the body (7) of the license plate, wherein the body of the license plate serves as the base and casing of these components, and the body of the license plate is made from insulating material, with the front face of the license plate body being provided with windows through which the colorful light information displays (41) radiate color light signal to outside.

23. (New) The motor vehicle identity anti-fake apparatus according to claim 13, characterized in that said microcomputer (1), information displays (4) and communicator (2) are packaged into a cartridge which is mounted inside the cab of the vehicle.

24. (New) A motor vehicle identity anti-fake method by using the motor vehicle identity anti-fake apparatus according to claim 13, characterized in that the motor vehicle identity anti-fake apparatus automatically detects the status of the vehicle identity, displays or communicates in a wireless manner the detection results according to pre-configurations of the administrative institution or to the real-time wireless remote control instructions issued by the administrative institution, wherein

the administrative institution loads in advance in the microcomputer (1) operation management software, and writes into the microcomputer the archive information of the vehicle and identify identification information of respective member anti-fake means (3) and the position on which the respective member anti-fake means are located; after completing the above said configurations, the motor vehicle identity anti-fake apparatus starts to operate automatically under the control of the microcomputer; and wherein

according to the predetermined program, the microcomputer makes detection and judgment automatically with respect to the following five aspects based on the detection demand, time information, current image feature information of the vehicle, the identity feature information of the illegal vehicles which are required to be particularly looked up, issued by the administrative institution in wireless manner and received by the communicators (2):

(1) judging the legality of the license plate or members of the vehicle, wherein the microcomputer (1) extracts information from respective member anti-fake means (3) and compares the extracted information with the feature information of the respective member anti-fake means previously stored in the microcomputer (1); if all the features are consistent with each other, it indicates that the identity of the license plate and members are legal; if the feature information of one or more of the member anti-fake means is inconsistent or does not exist, it means that the identity of the vehicle is illegal;

(2) judging whether the motor vehicle has passed the verification and check with respect to stipulated items on schedule, wherein

the microcomputer (1) retrieves contents of the items which have passed the verification and check and the period of validity from vehicle archive information stored in advance in the memory (12) of the microcomputer, and makes judgment to determine whether or not said items are still within said period of validity; if all the items fall within the period of validity, it means that the vehicle has passed the verification and check with respect to the stipulated items on schedule; otherwise, it means that the identity of the vehicle is illegal;

(3) judging whether the motor vehicle has special usages or not, wherein the microcomputer (1) retrieves and judges information on usage of the vehicle and period of validity of the usage from the vehicle archive information stored in advance in the memory (12) of the microcomputer; if there exists some special usages which should be

registered in the administrative institution and such special usages fall within the period of validity, it means that the vehicle has such special usages; otherwise, it means that the vehicle has no such special usages;

(4) judging to determine whether the vehicle belongs to an illegal vehicle particularly tracked by related enforcement organ, wherein

the communicator (2) receives the identity feature information issued in wireless manner by the administrative institution about the illegal vehicle that needs to be particularly tracked, and immediately stores such information into the microcomputer (1); the microcomputer (1) compares the received feature with the feature of the present vehicle as stored in advance; if the features are consistent with each other, it means that the present vehicle belongs to the illegal vehicle particularly tracked by the related enforcement organ;

(5) judging whether the appearance and color are in conformity with those of in the enrollment and registration, wherein

the communicator (2) receives the feature information about the real-time image of the present vehicle transmitted by the external detection station, and immediately stores the received feature information into the microcomputer (1); the microcomputer compares the received information with the image feature of the present vehicle in the vehicle archive information stored in advance; if the comparison result is consistent, it means that the vehicle is legal in terms of the appearance and the color; otherwise, it means that the vehicle identity is illegal;

and wherein

the microcomputer (1) stores at any moment the detection and judgment conclusions in terms of the above five aspects into the memory (12), and at the same time controls the display modes and contents of the information displays according to the property of the detection and judgment conclusions, as well as controls the transmission timing and contents of the

communicators (2) according to the instructions as issued by the administrative institution in a wireless communication manner.

25. (New) The motor vehicle identity anti-fake method according to claim 24, characterized in that said step of controlling the transmission timing and contents of the communicators by the microcomputer according to the instructions as issued by the administrative institution in a wireless communication manner further comprising the following steps:

the receiver of the communicator (2) being always in operation status under the management of the microcomputer, upon the microcomputer (1) finds that the communicators (2) receive the calling information of the management center or the detection station, the microcomputer storing the set of information into the memory (12), and making judgment from this set of information to determine whether there exists a detection demand of the administrative institution for checking and detecting the present vehicle; and if there exists such a detection demand, the microcomputer (1) furthers determining the authority of the detecting party; if the detection demand is legal, according to a predetermined program, the microprocessor (11) of the microcomputer (1) selecting information within the authority of the detecting party from the information stored in the memory (12), and organizing and generating reply information and controlling the transmitter of the communicators (2) to transmit the reply information.